

REMARKS

Status of the Claims

Claims 48 and 56 are currently amended. Present claim 48 find support in the specification at page 20, lines 2-5, and Examples 13-14. Currently amended claim 56 finds support in Examples 13-14. No new matter has been added. Elected claims 48-54, 56, 59-60, and 62 should be examined.

Applicants respectfully request that claim 63 be rejoined with the elected claim set. Withdrawn claim 63 depends from elected claim 48 and is embraced by the elected invention.

General Comments

Applicants thank Examiner Baum for helpful comments during the telephone discussion of November 15, 2004.

Rejections- 35 U.S.C. § 112, first paragraph (written description)

Claims 48-50, 52-54, 56, 59-60, and 62 are rejected under 35 U.S.C. § 112, first paragraph, for alleged lack of written description. See Office Action of June 18, 2004, pages 4-6, item 5.

Examiner Baum has indicated that his concerns would be obviated by amending claim 48 to recite hybridization conditions and that the translation product has starch branching enzyme II activity. Office Action, page 6, first paragraph. As the present version of the claims avoid these concerns, the rejection should be withdrawn.

Rejections- 35 U.S.C. § 112, first paragraph (enablement)

Claims 48-54, 56, 59-60, and 62 are rejected under 35 U.S.C. 112, first paragraph, for alleged lack of enablement. Office Action, pages 6-10, item 6. As indicated in the Office Action, "the Office interprets the claim to read on nucleic acid sequences in sense orientation and the Office interprets the word 'altering' to mean 'increasing' the expression of a gene." Office, page 7, second paragraph. Based on the PTO's own interpretation of "altering," the PTO alleges "Applicants have not disclosed a plant with altered (increased) expression of a

gene encoding starch branching enzyme II.” Office Action, page 7, final paragraph. Applicants respectfully traverse this rejection.

As discussed with Examiner Baum on November 15, 2004, the present application supports both increased and decreased gene expression. However, in an effort to advance prosecution, applicants have agreed to prosecute claims embracing decreased gene expression in a Divisional application. As such, the present response addresses increased gene expression only.

The as-filed application provides several examples of nucleotide sequences that hybridize to the *SBE II-D1* gene and exhibit SBE II activity. For instance, Example 13 details isolation of a *SBE II* gene, represented by clone SBE-9, that encodes the amino acid sequence of SEQ ID NO:12. See Specification, page 36. A cDNA clone having about 97% sequence identity with the coding region of SEQ ID NO:10, SBE-9 was shown to have SBE activity by Rahman *et al.* (2001), where the clone is designated cDNA1. A copy of Rahman *et al.* (2001) is enclosed for consideration (previously submitted).

In a second example, Example 14 states “sequencing of the *SBE II* gene contained in clone 2, termed *SBE II-D1* (see SEQ ID NO: 10), showed that it coded for the N-terminal sequence of the major isoform of SBE II expressed in the wheat endosperm, as identified by Morell *et al.* (1997). This is shown in Figure 13.” See Specification, page 37. A copy of Morell *et al.* (1997) is enclosed for consideration (previously submitted).

In addition to the specification’s examples of nucleotide sequences that hybridize to the *SBE II-D1* gene, Declarant Sadequr Rahman indicates that his laboratory has isolated additional wheat nucleotide sequences, coding for starch branching-enzyme activity, that hybridize to the *SBE II-D1* gene. See Exhibit A: Declaration of Dr. Sadequr Rahman, executed March 12, 2004 (previously submitted). Specifically, Declarant Rahman attests that his laboratory has identified ten wheat cDNA sequences, all of which encode SBE II activity and hybridize to the *SBE II-D1* gene under stringency conditions similar to those detailed in Examples 13-14 of the specification. See Exhibit A.

Based on the examples in the as-filed specification and the data advanced in Exhibit A, a person knowledgeable in plant molecular biology would have understood that the present invention provides several specific nucleotide sequences, all of which hybridize to the *SBE II-DI* gene and encode starch branching enzyme activity.

Therefore, the specification provides full disclosure to guide a person skilled in the art to make and use the present invention. For this reason, applicants respectfully request reconsideration and withdrawal of the rejection.

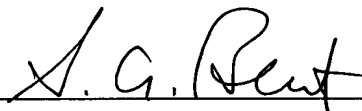
CONCLUSION

If there are any questions concerning this application, the examiner is courteously invited to contact the undersigned counsel.

Respectfully submitted,

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By



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